UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

OFFICE OF ECOSYSTEM PROTECTION

ONE CONGRESS STREET

BOSTON, MASSACHUSETTS 02114

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: MA0030571

NAME AND ADDRESS OF APPLICANT:

Quabbin Wire & Cable Co., Inc.
10 Maple Street
Ware, MA 01082

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Quabbin Wire & Cable Co., Inc.
10 Maple Street
Ware, MA 01082

STANDARD INDUSTRIAL CODE: 3357 - Insulating non-ferrous wire

RECEIVING WATER: **Ware River**

Chicopee River Watershed (MA 36)

CLASSIFICATION: **Class B**

1.0 PROPOSED ACTION, TYPE OF FACILITY, AND DISCHARGE LOCATION

1.1 Proposed Action

The above named applicant has applied to the U.S. Environmental Protection Agency (EPA) for re-issuance of a National Pollution Discharge Elimination System (NPDES) permit to discharge contact cooling water into the designated receiving water. The permit was issued to Quabbin Wire and Cable Company, Inc. on August 14, 1997 and expired on August 14, 2001. EPA received a permit renewal application dated February 16, 2001 from Quabbin Wire and Cable. Since the permit renewal application was deemed both timely and complete by EPA, the permit has been administratively continued. Their storm water discharge is covered under the NPDES Storm Water Multi-Sector General Permit MAR05B840.

1.1.1 Recent Permitting History

April 2, 1986	Inspection of Quabbin Wire & Cable by Massachusetts Department of Environmental Protection (MassDEP), Western Region Office
April 28, 1986	MassDEP Notice of Violation, requesting a permit application from Quabbin Wire & Cable
August 6, 1986	Application submitted to EPA
August 21, 1986	Application submitted to MassDEP
October 10, 1986	Application deficiency letter sent by EPA for more information on storm water outfalls
November 10, 1986	Letter from Quabbin Wire & Cable explaining storm water outfalls
November 14, 1996	Revised application submitted
February 8, 1993	NPDES Storm Water Permit MAR00A028 issued
November 21, 1996	Draft permit and public notice period
November 27, 1996	Comment letter from Quabbin Wire & Cable
August 14, 1997	Final permit issued
January 20, 1998	NPDES Storm Water Permit MAR05B043 issued
October 17, 2000	EPA sent re-application materials to permittee
February 14, 2001	NPDES Storm Water permit MAR05B840 issued
February 16, 2001	Application materials submitted to EPA April 11, 2001 Application complete letter sent by EPA
August 1, 2002	NPDES permit renewal site visit by MassDEP
October 24, 2006	NPDES permit renewal site visit by MassDEP and EPA

1.2 Type of Facility

Quabbin Wire & Cable, located in Ware, Massachusetts, is engaged in the manufacture and distribution of thermoplastic shielded and unshielded cables for the global technology market. Figure 1 shows the facility's location. Raw materials brought into the site include polyvinyl chloride (PVC) and high density polyethylene (HDPE) plastic pellets, dyes, and inks, as well as plain and tin coated copper wire, mylar wrap, and aluminum wire for woven sheathing.

1.3 Discharge Location

The Quabbin Wire and Cable facility (Quabbin) is located in a former textile mill building on Maple Street, between the Ware River and a commercial/industrial neighborhood in the center of Ware. The Quabbin manufacturing and distribution buildings from the south bank of the Ware River. A

hydroelectric power plant abuts the river on the north bank of the river. The Quabbin facility lies downstream of the power plant dam and two other small dams in Ware, and upstream of the confluence with Muddy Brook.

Three storm water outfalls discharge from the Quabbin property to the Ware River under the NPDES Multi-Sector General Permit for Storm Water Discharges Associated With Industrial Discharges. The discharge of contact cooling water via Outfall 003 to the Ware River is covered by this permit. The site plan (Figure 2) shows the location of Outfall 003.

2.0 DESCRIPTION OF DISCHARGE

This draft permit authorized the discharge of contact cooling water from Outfall 003. The receiving water is the Ware River which flows from east to west on the northern edge of manufacturing building. The discharge is contact cooling water which overflows from a cooling water system used to cool plastic coated wire and wire bundles after extrusion.

3.0 RECEIVING WATER DESCRIPTION

Quabbin Wire & Cable discharges to a segment of the Ware River which has been designated as a Class B warm water fishery by MassDEP. The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(3)(b) state that Class B waters have the following designated uses*: "These waters are designated as habitat for fish, other aquatic life and wildlife, and for primary and secondary contact recreation. Where designated they shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."*

The MassDEP Division of Watershed Management, has published the *Chicopee River Basin 1998 Water Quality Assessment Report.* This report presents a summary of current water quality data and information as it relates to assessing the status of the state's designated uses for rivers, streams, and in the watershed. This facility is located about one mile south of the Ware Dam in the upper mile of segment MA 36-06, an 8.8 mile segment from the Ware Dam to the Thorndike Dam in Palmer. In 1998 the Division of Watershed Management conducted benthic macroinvertebrate surveys. In this segment the benthic community, in the vicinity of Quabbin Wire and Cable, was considered "non-impaired." The *Aquatic Life Use* is assessed as "support" in these segments. Because of high fecal coliform bacteria counts at the upstream Route 32 bridge during dry weather conditions, *Primary Contact Recreational Use* is assessed as "non-support". The fecal coliform bacteria counts did not exceed the *Secondary Contact Recreational Use* guidance, and this use is assessed as "support". Based on the overall high aesthetic conditions, the *Aesthetics Use* is assessed as support.

The Ware River segment receiving the Quabbin Wire and Cable discharge, MA36-06, is currently on the Massachusetts Year 2004 Integrated List of Water 303(d) list of "Category 5" waters which are defined as "waters requiring a TMDL" (total maximum daily load). The pollutant requiring a TMDL is pathogens.

4.0 LIMITATIONS AND CONDITIONS

The proposed effluent limitations and monitoring requirements may be found in the draft NPDES permit.

5.0 PERMIT BASIS: STATUTORY AND REGULATORY AUTHORITY

5.1 General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

EPA is required to consider a) technology-based requirements, b) water quality-based requirements, and c) all limitations and requirements in the current/existing permit, when developing permit limits. These requirements are described in the following paragraphs.

5.2 Technology-based Requirements

Subpart A of 40 CFR §125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit. EPA has promulgated technology-based National Effluent Guidelines for contact cooling water from plastics molding and forming (Standard Industrial Code 3357) [See 40 CFR § 463.12].

5.3 Water Quality-based Requirements

Under Section 301(b)(1)(C) of the CWA and EPA regulations NPDES permits must contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards.

Water quality standards consist of three parts: (1) beneficial designated uses for a water-body or a segment of a water-body; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) antidegradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards, found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless site specific criteria are established.

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has the "reasonable potential" to cause or contribute to an excursion above any water quality standard (see 40 CFR §122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining "reasonable potential", EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's reissuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

5.4 Anti-backsliding

Anti-backsliding as defined in 40 CFR §122.44(l)(1) requires reissued permits to contain limitations as stringent as or more stringent than those of the previous permit unless the circumstances allow application of one of the defined exceptions to this regulation. As explained above, anti-backsliding applies to limits contained in the existing permit and, therefore, these limits are continued in the draft permit. Anti-backsliding is not triggered in this Draft Permit.

5.5 Anti-degradation

The Commonwealth of Massachusetts' anti-degradation provisions found in 314 CMR 4.04 ensure that provisions in 40 CFR Section 131.12 are met. These provisions ensure that all existing uses in the receiving water, along with the level of water quality necessary to protect those existing uses, are maintained and protected. The effluent limits in the draft permit should ensure that provisions in 314 CMR 4.04 are met. The State is also asked to certify that the anti-degradation provisions in State law are met.

6.0 EXPLANATION OF EFFLUENT LIMITATIONS

6.1 Facility Information

The Quabbin site has been an industrial site since the first textile mills were erected on the site in the 19th century. Quabbin has been manufacturing and distributing plastic coated wire and cable at the site since 1975.

Quabbin manufactures a variety of low temperature thermoplastic shielded and unshielded cables for computer, data transmission, instrumentation, and other electronic applications. Quabbin's manufacturing process includes covering bare or pre-coated copper wire with extruded plastic. Pre-coatings include polyurethane wrap, woven aluminum sheathing applied by Quabbin and tin coatings applied by the copper wire supplier. Plastic coating may be applied to a single wire or over a bundle of copper wires that have already been coated with color-coded plastic by Quabbin.

Quabbin buys copper wire of various gauges and extrudes a plastic coating onto them made of polyvinyl chloride (PVC) or high-density polyethylene (HDPE). The plastic coating material is delivered in large boxes of plastic pellets. Most of the pellets are white upon delivery and are mixed with coloring in the extruder hopper. Some pellets come already colored. Some of the copper wire is purchased pre-coated with tin. The coating materials include metal stabilizer additives.

Plastic pellets are fed into a hopper above a spiral extruder where, under high pressure the plastic tube is formed around the wire cable. Immediately following formation, the wire coated cable passes

through a long re-circulating cooling bath until the plastic has cured enough to maintain its shape for marking and coiling. After the cooling bath, the cable is dried, stamped with identifying information and coiled on large spools. Quabbin operates approximately 8 extrusion machines – although rarely all at one time.

Quabbin uses only untreated well water in their cooling baths. The water is pumped from two on-site wells which are 650 to 750 feet deep. The combined flow from the two wells is 40 to 45 gallons per minute (gpm). The well water enters the cooling bath system in the cooling water holding tanks located on the ground floor of the manufacturing building. Since most of the cooling water is recycled, fresh well water is only added when the temperature of the cooling water in the holding tanks rises to 82ºF. The resulting overflow is discharged to the Ware River via Outfall 003.

Well water supplementation is not constant, but rather depends on the size and number of extrusion machines in use at any one time. More well water is used in the summer when the ambient well water temperature is elevated. No chemicals are added to the well water for any purpose. Iron accumulation is collected in a filter sock attached to the return line from the cooling trays. Occasionally, the tanks are drained (one at a time) and iron buildup is mechanically removed from the sides and bottom of the holding tanks. The iron is disposed of as a solid waste.

Discharge to the Ware River occurs when the holding tanks overflow onto the floor in the small room in which they sit. The water flows to a floor drain and then out the side of the building directly into the Ware River. There is only one entrance to the room which is elevated above the floor by about 9 to 12 inches so there is capacity to store some water on the floor and spill protection for the outfall from the rest of the plant.

Quabbin manufactures wire and cable for distribution around the world. As such, their products must meet hazardous substance standards for a variety of countries, included the RoHS Directive requirements set by the European Union (EU). The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. During the past five years, Quabbin has worked with their suppliers to develop plastic coating materials which meet these and other market-specific environmental standards. As a result, the lead content in the plastic stabilizer additives has been significantly reduced.

6.2 Permitted Outfalls

6.2.1 Storm Water Outfalls:

Outfalls 0011, 0021, and 0031 are covered under the NPDES Storm Water Multi-Sector General Permit MAR05B840 issued February 14, 2001.

6.2.2 Outfall Number 003

The discharge from Outfall 003 consists entirely of contact cooling water. Figure 2 is a schematic drawing of the processes contributing to outfall 003. Cooling water is withdrawn from two on-site wells that supply as much as 7,000 gpd cooling water. The pumping rate for these wells is regulated by flow meters connected in line with the system. The cooling water is fed from the holding tanks to a series of water troughs in each production line that immerse or spray the coated wire to gradually bring down the temperature. The coated wire travels through each tray at different speeds/times depending

on the product being produced. The process controls are set to keep the discharge temperature under 82 °F.

6.3 River Flow and Dilution Factor

Water quality based limitations are established with the use of a calculated available dilution. Title 314 CMR 4.03(3)(a) requires that effluent dilution be calculated based on the receiving water 7Q10. The 7Q10 is the lowest observed mean river flow for 7 consecutive days, recorded over a 10-year recurrence interval. The 7Q10 for many streams is calculated based on data from the United States Geological Survey (USGS) low-flow frequency statistics for gauging stations. Additionally, the facility design flow is used to calculated available effluent dilution.

The 7Q10, or the 7-day mean stream low flow with 10-year recurrence interval, used to evaluate the effluent limits in the draft permit has been updated based on data from USGS low-flow frequency statistics for gaging stations. The revised 7Q10 at the USGS gaging station 01173500 on the Ware River at Gibbs Crossing is 22.37 cubic feet per second (cfs), with a drainage area of 197 square miles (mi^2). Since the drainage area of the Ware River at the Quabbin Wire & Cable Co. is 165 mi^2, the 7Q10 and dilution factor are recalculated below:

Quabbin Wire & Cable maximum plant discharge = 0.025 MGD = 0.0387 cfs

7Q10 at USGS Station 01173500 Ware River at Gibbs Crossing = 22.37 cfs; Drainage area = 197 mi^2

Drainage area at Quabbin Wire & Cable = 165 mi^2

7Q10 at Quabbin Wire & Cable = (165 mi^2 / 197 mi^2) (22.37 cfs) = 18.7 cfs

Dilution Factor = (7Q10) + (max. plant discharge) / (max. plant discharge) = (18.7cfs + 0.0387 cfs) / 0.0387 cfs = 484

This dilution factor was used in assessing the need for pollutant effluent limits.

6.4 Flow

Flow shall be monitored in accordance with requirements of 40 CFR §122.44(i)(1)(ii). The current permit requires Quabbin to monitor flow on a monthly basis (see summary in Attachment A). The draft permit reflects average monthly and maximum daily limits that reflect actual use. The effluent limitation for monthly average flow is 8,200 gallons per day (gpd) and the daily maximum discharge limit is 25,000 gpd.

6.5 Biochemical Oxygen Demand (BOD_5)

An excess of oxygen demanding substances (measured as BOD_5) can cause depletion of the in-stream dissolved oxygen levels thereby causing harm to aquatic life. The effluent limit guidelines established for Plastics Molding and Forming Point Source Category (40 CFR §463.12) include a maximum daily limit of 26 mg/l for BOD_5. The Draft Permit establishes a maximum daily limit of 26 mg/l, consistent with this technology based limit, monitored quarterly.

6.6 Oil and Grease

The effluent limit guidelines established for Plastics Molding and Forming Point Source Category (40 CFR §463.12) include a maximum daily limit for O&G of 29 mg/l. However, the maximum daily limit for oil and grease in the draft permit is based on Massachusetts Water Quality Standards. The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(3)(b)(7), state: *These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable*

taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of 15 mg/l is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (EPA Water Quality Criteria, 1972).

The maximum daily limit for oil and grease of 15 mg/l at Outfall 003 is included to ensure compliance with state water quality standards.

6.7 Total Suspended Solids (TSS)

TSS discharged to receiving water increases turbidity, contributes to oxygen depletion and may contain compounds. The effluent limit guidelines established for Plastics Molding and Forming Point Source Category (40 CFR §463.12) include a maximum daily limit of 19 mg/l for Total Suspended Solids (TSS). The Draft Permit establishes a maximum daily limit of 19 mg/l, consistent with this technology based limit, monitored quarterly.

6.8 pH

The Massachusetts Surface Water Quality Standards, 314 CMR 4.00, for Class B waters require pH to be within the range of 6.5 to 8.3 standard units (s.u.) and prohibit discharges that cause the in-stream pH to change more than 0.5 s.u. outside of the background range. Effluent limit guidelines for contact cooling water from plastics molding and forming point sources (40 CFR 463.1) require effluent pH to be between 6.0 and 9.0 s.u. at all times. For the past 5 years, pH levels have ranged from 6.7 to 8.2 s.u., as can be seen in the discharge monitoring summary in Attachment A. The effluent limit for pH in the draft permit remains the same as in the current permit at 6.5 to 8.3 s.u.

6.9 Temperature

Water for contact cooling is drawn from two artesian wells on-site. The cooling water is pumped to cooling trays or holding tanks in either building. Water is re-circulated through the cooling trays and holding tanks and is discharged from the northern side of the facility, to the Ware River through outfall 003. The temperature of the re-circulating water is monitored with thermocouples in the holding tanks before discharge, and the actual discharge temperature is measured with a thermocouple attached to the inside of the discharge pipe.

The State Water Quality Standards for class B waters (314 CMR 4.05(3)(b)) pertaining to temperature in warm water streams state: *Temperature* -

a. Shall not exceed ...83°F (28.3°C) in warm water fisheries, and the rise in temperature due to a discharge shall not exceed ... 5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month) ... and;

b. natural seasonal and daily variations shall be maintained; there shall be no changes from background conditions that would impair any uses assigned to this Class, including site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.

As can be seen in the Data Monitoring Summary table in Attachment A, the discharge temperatures from outfall 003 have averaged 80°F and ranged from 73 to 82°F. In addition, upstream and downstream monitoring has indicated l°F or less temperature difference at locations upstream and downstream of outfall 003. The effluent temperature limits requiring reporting the average monthly temperature and limiting the maximum daily discharge temperature to 82°F are continued in draft

permit. However, the requirement for monitoring and reporting upstream and downstream temperature have not been included in the draft permit since Quabbin has demonstrated that the current discharge flows and temperature do not result in a temperature impact on the Ware River close to 5 °F. The new flow limit in the draft permit combined with the effluent temperature limits and available dilution (484:1) will ensure that the current conditions continue.

6.10 Metals

Many types of metals can be found in ground and surface waters around New England. The metals linked most often to human toxicity are lead, mercury, arsenic and cadmium. Other metals, including copper, zinc and chromium, are actually nutrients in small amounts, but can also be toxic in larger doses.

Metals can be toxic to marine and freshwater organisms, as well as contaminating other plant and animal species. Often, water organisms are even more sensitive than humans to metals found in the water. Ultimately, metals can become concentrated in the human food chain. For instance, because of contaminated water, food sources such as vegetables, grains, fruit, fish and shellfish can become contaminated by accumulating metals from the soil and water used to grow them.

Sources of metal in contact cooling water discharge include process chemicals, groundwater and process piping. The materials used in the plastic coating process at Quabbin include metal stabilizers including lead, zinc, copper, barium and antimony. In addition, the contact cooling water passes through copper pipes and steel troughs prior to discharge. While no data is available for Quabbin's wells, well water may naturally contain elevated levels of heavy metals.

Table 1 Summary of Quarterly Metals Monitoring 2001 Through 2006

(all concentrations in mg/l)

	2001 - 2006		WQC for Fresh Water		WQC Human Health
Parameter	Average	Maximum	Chronic	Acute	Organism Only
Arsenic	0	0	*0.150*	*0.340*	*0.140*
Copper	0.041	0.284	*0.009*	*0.013*	----
Lead	0.009	0.056	*0.003*	*0.065*	----
Zinc	0.187	0.678	*0.120*	*0.120*	*26.0*

There are no technology based effluent limit guidelines for metals in the Plastics Molding and Forming Point Source Category (40 CFR 463). The concentrations of arsenic, copper, lead and zinc, measured in quarterly effluent samples during the past five year (see Table 1) indicate that metal concentrations were relatively low. Table 1 summarizes the metals concentrations in quarterly effluent samples from 2001 to the present and compares them to federal water quality criteria (WQC). The concentration of arsenic in all of the past effluent samples has been below the practical quantification limit (PQL) of 0.004 mg/l. The average concentration of copper, lead and zinc were above the chronic exposure limits for fresh water organisms in the effluent discharge. However, given the dilution available in the Ware River (see section 6.3), there is no expectation that water quality standards in the receiving water will be exceeded due to the Quabbin discharge. As an example, using the dilution factor of 484 (see calculation in section 6.3 of this fact sheet) and the average and maximum copper concentrations, the in-stream concentrations resulting from Quabbin cooling water discharge can be compared to WQC as shown below.

Ave. in-stream copper conc. = $\frac{0.041 \text{ mg/l}}{484}$ = 0.000085 mg/l << Chronic Copper WQC (0.009 mg/l)

Max. in-stream copper conc. = $\frac{0.284 \text{ mg/l}}{484}$ = 0.00059 mg/l << Acute Copper WQC (0.013 mg/l)

The draft permit continues monitoring of copper, lead and zinc on a quarterly basis.

In addition to lead, copper and zinc, the standard whole effluent toxicity (WET) test (discussed in section 6.12) includes total metals analysis for cadmium, chromium, nickel, aluminum, magnesium and calcium.

After reviewing the material safety data sheets (MSDS) for materials used in the coating process, EPA has a requirement to monitor antimony in effluent on a quarterly basis. The EPA "organism only" human health water quality criterion is 560 µg/l for antimony, a priority pollutant. There are no fresh water chronic or acute WQC for antimony.

6.11 Bis (2-ethylhexyl) phthalate

The concentration of bis (2-ethylhexyl) phthalate in all of the past effluent samples has been consistently below the practical quantification limit (PQL) of 0.005mg/l during the last five years (see Attachment A). This compound may be an additive during resin manufacturing. However, while Quabbin purchase resins used in plastic coating, they do not manufacture resins. Bis (2-ethylhexyl) phthalate not appear in the effluent from Quabbin's contact cooling in the wire coating process. The quarterly monitoring requirement for bis (2-ethylhexyl) phthalate has been eliminated in the draft permit based on the past monitoring data and the high dilution in the Ware River.

6.12 Whole Effluent Toxicity

Whole Effluent Toxicity (WET) testing is conducted to determine whether certain effluents, often containing potentially toxic pollutants, are discharged in a combination which produces a toxic amount of pollutants in the receiving water. Therefore, toxicity testing is being used in conjunction with pollutant-specific control procedures to minimize the discharge of toxic pollutants.

Two sources of legal authority explain how regulatory authorities have the legal basis for establishing toxicity testing requirements and toxicity-based permit limits in NPDES permits. Sections 402(a)(2) and 308(a) of the Clean Water Act provide EPA and States with the authority to require toxicity testing. Section 308 specifically describes biological monitoring methods as techniques which may be used to carry out objectives of the Act. Under certain State narrative water quality standards, and Sections 301, 303 and 402 of the Clean Water Act, EPA and the States may establish toxicity-based limits to implement the narrative "no toxics in toxic amounts".

The regulations at 40 CFR Part 122.44(d)(ii) state, "When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution...(including) the sensitivity of the species to toxicity testing...." The EPA and MassDEP believe that the complexity of this effluent is such that toxicity testing is required to evaluate and address any water quality impacts. The MassDEP in its "Implementation Policy for the Control of Toxic Pollutants in Surface Waters" (February 23, 1990) sets forth toxicity limits according to dilution factors based on perceived risk. Results of these toxicity tests will demonstrate compliance with the Massachusetts Water Quality Standards.

To be consistent with toxicity policy for dilution in the low risk category (>100:1) (484:1 for the Quabbin discharge) a WET acute LC_{50} reporting requirement is specified in the draft permit. The draft permit specifies LC_{50} testing two times a year for one species. The species required for testing is the daphnid, *Ceriodaphnia dubia*. Toxicity tests are to be conducted in June and September. Toxicity testing requirements are described in Attachment A to the draft permit. The draft permit allows for the possibility of eliminating the WET testing if no toxicity is found after two tests.

7.0 ESSENTIAL FISH HABITAT

Under the 1996 Amendments to the Magnuson-Stevens Fishery Conservation and Management Act, EPA is required to consult with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) if EPA's actions or proposed actions that it permits may adversely impact any essential fish habitat (EFH). The Amendments broadly define EFH as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Adverse impact means any impact which reduces the quality and/or quantity of EFH. Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. EFH is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855 (b)(1)(A)). EFH designations were approved by the U.S. department of Commerce on March 3, 1999.

EPA's review of available EFH information indicates that the Ware River is not designated EFH for any federally managed species.

8.0 ENDANGERED SPECIES ACT

Section 7(a) of the Endangered Species Act of 1973, as amended ("Act") grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical ("A critical habitat"). The Act requires every Federal agency, in consultation with and with the assistance of the Secretary of the Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or results in the destruction or adverse modification of critical habitat. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species.

EPA believes the authorized discharge from this facility is not likely to adversely affect any federally-listed species, or their habitats. EPA is informally consulting with USFWS to confirm this determination.

9.0 STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the MassDEP either certifies that the effluent limitations contained in this permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards or waives its right to such certification. EPA has requested that MassDEP certify the permit. Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located which determines that all water quality standards, in accordance with Section 301(b)(1)(C) of the CWA, will be satisfied. Regulations governing state certification are set forth in 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d). EPA

expects that the permit will be certified.

10.0 COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Ellen Weitzler, U.S. EPA, Office of Ecosystem Protection**,** Industrial Permits Branch, 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

11.0 EPA AND MASSDEP CONTACTS.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Ellen Weitzler
US Environmental Protection Agency
Office of Ecosystem Protection
1 Congress Street
Suite 1100 (CPE)
Boston, Massachusetts 02114-2023
Telephone: 617-918-1582
Fax: 617-918-0582
e-mail: weitzler.ellen@epa.gov

and

Kathleen Keohane
MA Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd floor
Worcester, MA 01608
Telephone: 508-767-2856
Fax: 508-791-4131
email: kathleen.keohane@state.ma.us

_____
Date

Linda Murphy, Director*
Office of Ecosystem Protection
U.S. Environmental Protection Agency

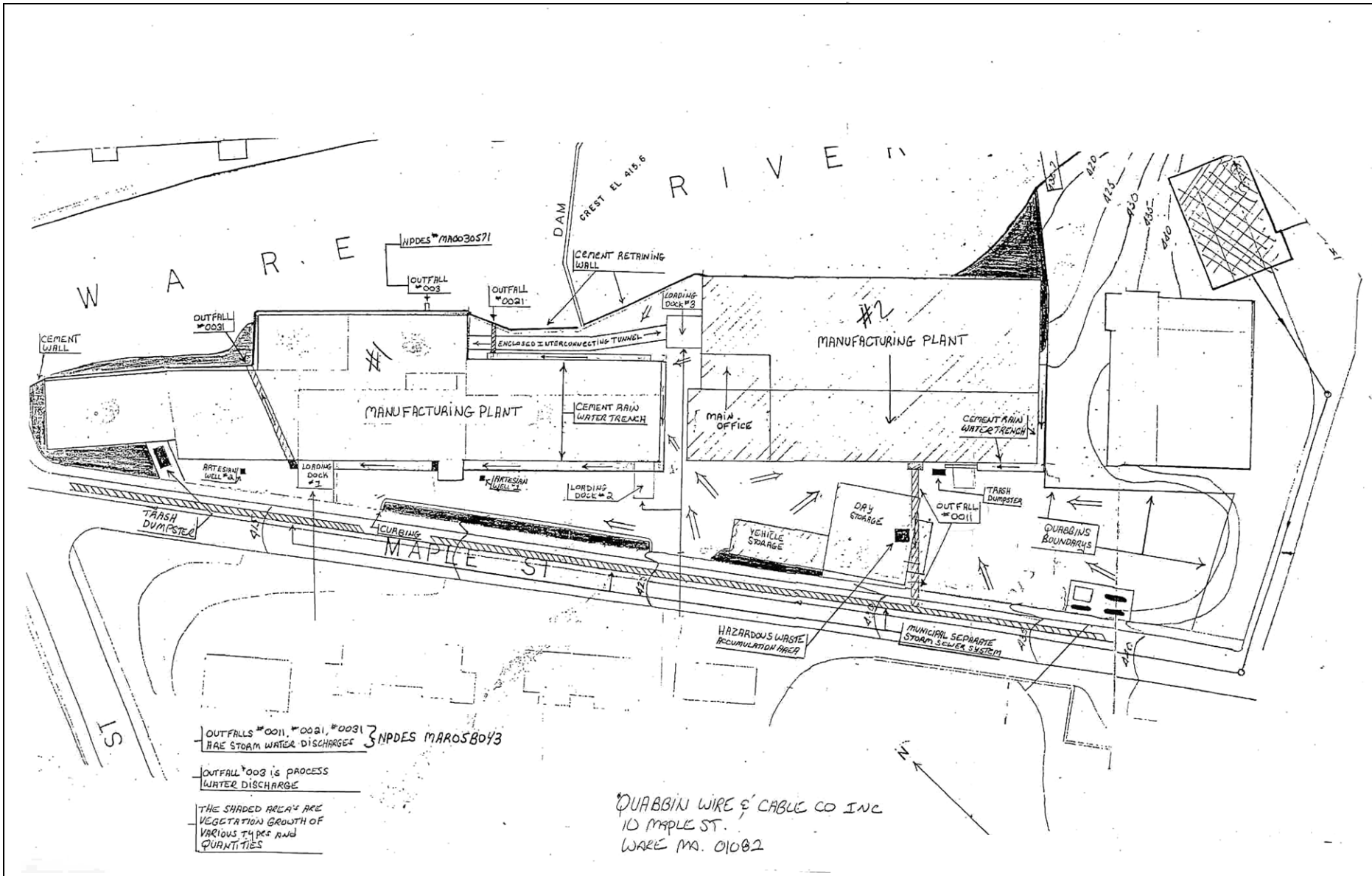


FIGURE 2
SITE PLAN
QUABBIN WIRE & CABLE

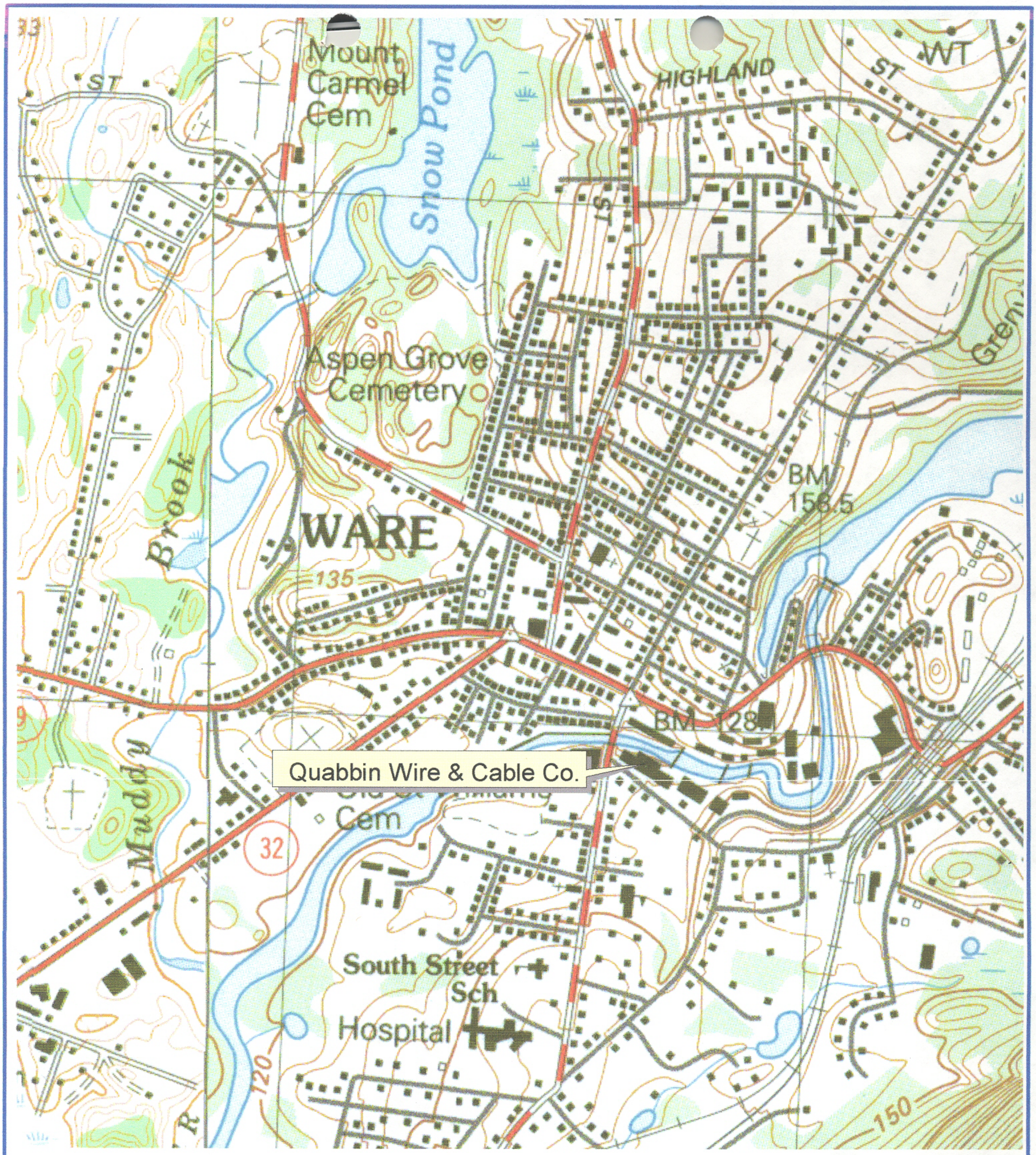


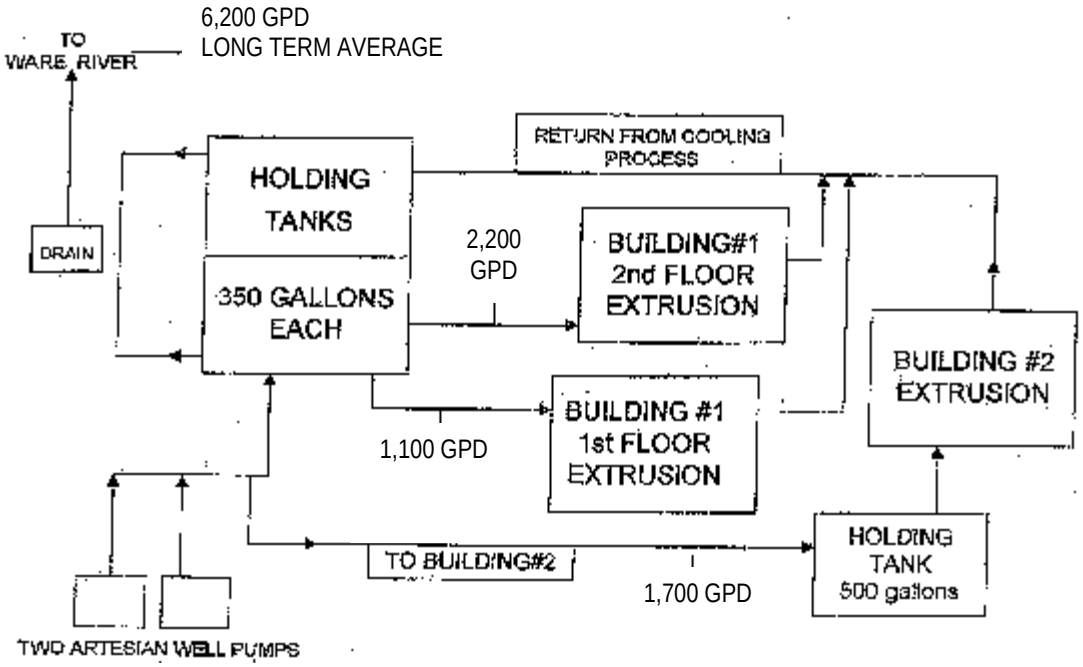
Figure 1
Quabbin Wire & Cable Co.
MA0030571

N

0.1 0 0.1 0.2 Miles

The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

LINE DRAWING FOR QUABBIN WIRE & CABLE CO. , INC.
CONTACT COOLING WATER



Source: Quabbin Wire & Cable Company, Inc. NPDES Permit application, submitted February 16, 2001

FIGURE 3
FLOW DIAGRAM
QUABBIN WIRE & CABLE

ATTACHMENT A
DISCHARGE MONITORING REPORT SUMMARY OUTFALL 003

	Flow (MGD)				pH (s.u.)						
DATE	Maximum Daily	Average Monthly	Effluent Temp (ºF)	Temp (downstream?)	Maximum	Minimum	Arsenic (mg/l)	Copper (mg/l)	Lead (mg/l)	Zinc (mg/l)	Effluent bis (2-ethyl-hexyl) Phthalate (µg/l)
31-Aug-06							0	0.0237	0	0	0
31-Jul-06											
30-Jun-06											
31-May-06							0	0.0498	0	0.136	0
30-Apr-06											
31-Mar-06	0.01032	0.00469									
28-Feb-06	0.01068	0.00355	82	0	7.3	7.06	0	0.0703	0.0128	0.168	0
31-Jan-06	0.01054	0.00317									
31-Dec-05	0.01974	0.00627									
30-Nov-05	0.01068	0.00445	81	0	7.95	7.87	0	0.0136	0	0.0426	0
31-Oct-05	0.01173	0.00525									
30-Sep-05	0.01326	0.00555									
31-Aug-05	0.01408	0.00803	82	0	8.18	8.11	0	0.0176	0	0	0
31-Jul-05	0.01648	0.00566									
30-Jun-05	0.01585	0.00728									
31-May-05	0.01738	0.0061	81	0	8.04	8.01	0	0.0159	0.0045	0.0737	0
30-Apr-05	0.01416	0.00451									
31-Mar-05	0.01252	0.00606									
28-Feb-05	0.01274	0.00491	81	0	7.54	7.5	0	0.0225	0	0.0969	0
31-Jan-05	0.01229	0.00583									
31-Dec-04	0.01169	0.0051									
30-Nov-04	0.01156	0.00517	81	0	7.84	7.79	0	0.138	0.0557	0.389	0
31-Oct-04	0.01142	0.00521									
30-Sep-04	0.01543	0.00644									
31-Aug-04	0.01474	0.00803	80	0	7.77	7.62	0	0	0	0	0
31-Jul-04	0.01462	0.0047									
30-Jun-04	0.01639	0.00837									
31-May-04	0.01303	0.0067	79	0	8.05	8.00	0	0.284	0	0.0726	0
30-Apr-04	0.01299	0.00612									
31-Mar-04	0.01253	0.00646									
29-Feb-04	0.00979	0.0043	81	0	7.78	7.56	0	0	0.004	0.119	0
31-Jan-04	0.00873	0.00345									
31-Dec-03	0.00845	0.00415									
30-Nov-03	0.01056	0.0036	81	0	7.84	7.79	0	0.0436	0.0292	0.396	0
31-Oct-03	0.01035	0.00451									
30-Sep-03	0.00836	0.00339									
31-Aug-03	0.01308	0.00478	81	0	7.88	7.8	0	0.0118	0	0.288	0
31-Jul-03	0.01218	0.006									
30-Jun-03	0.00876	0.00446									
31-May-03	0.00817	0.00353	80	1	8.14	8.06	0	0.0165	0.0136	0.175	0
30-Apr-03	0.00977	0.00505									
31-Mar-03	0.00943	0.00469									
28-Feb-03	0.00877	0.00414	81	1	8.12	8.04	0	0.0056	0.0052	0.107	0
31-Jan-03	0.00868	0.00386									
31-Dec-02	0.00877	0.00392									
30-Nov-02	0.00934	0.00417	81	0	8.11	8.09	0	0.0877	0.0501	0.678	0
31-Oct-02	0.01001	0.00533									
30-Sep-02	0.00581	0.00202									
31-Aug-02	0.01355	0.00457	81	0	8.08	8.06	0	0.0221	0	0.324	0
31-Jul-02	0.01515	0.00628									
30-Jun-02	0.01525	0.00572									
31-May-02	0.00693	0.003	81	0	8.09	8.07	0	0.0025	0	0.262	0
30-Apr-02	0.011	0.00369									
31-Mar-02	0.00864	0.0028									
28-Feb-02	0.00766	0.00321	81	1	8.18	8.14	0	0.0237	0.0093	0.217	0
31-Jan-02	0.01281	0.00366									
31-Dec-01	0.00799	0.002									
30-Nov-01	0.00713	0.00255	78	1	8.24	8.14	0	0.0192	0	0.178	0
31-Oct-01	0.01137	0.00372									
30-Sep-01	0.01975	0.00659									
31-Aug-01	0.01388	0.0058	77	1	7.98	7.76	0	0.0362	0.013	0.128	0
31-Jul-01	0.01586	0.00516									
30-Jun-01	0.01444	0.0045									
31-May-01	0.01001	0.00279	73	1	7.89	7.88	0	0.0201	0	0.113	0
30-Apr-01	0.00575	0.00163									
31-Mar-01	0.0078	0.00214									
28-Feb-01	0.01092	0.00383	73	1	6.8	6.67	0	0.0139	0	0.107	0
31-Jan-01	0.00804	0.00368									
Minimum	0.0058	0.0016	73.0	0		6.67	0	0.000	0.000	0.000	0
Average	0.0116	0.0047	79.8	0.3	7.90	7.81	0	0.041	0.009	0.187	0
Maximum	0.0198	0.0084	82.0	1	8.24		0	0.284	0.056	0.678	0
Current Permit	Monitor	Monitor	83	5	8.3	6.5	Monitor	Monitor	Monitor	Monitor	Monitor
WQS			83		8.3	6.5					